

CLAIMS

1. Method for operating a frequency converter of a generator in particular of a wind energy turbine, in the event of a substantial grid voltage drop, wherein the frequency converter (10) comprises an AC/DC converter (20), to be connected to the generator (14), a DC/AC converter (22) to be connected to the voltage grid (18), and a DC link circuit (24) for connecting the AC/DC converter (20) to the DC/AC converter (22), the method comprising the step of
 - reducing an output voltage of the DC link circuit (24) for increasing an output current of the DC/AC converter (22) and/or
 - reducing the operation frequency of electronic switches (28) of the DC/AC converter (22) for increasing the output current of the DC/AC converter (22).
2. Method according to claim 1, wherein the reducing step or at least one of the reducing steps is performed when, for a few seconds, the grid voltage is decreased up to at least about 10 % of its normal value and wherein the reducing step of at least one of the reducing steps is terminated when, for a few seconds, the normal grid voltage is increased again up to at least about 80 % of its normal value.
3. Method according to claim 1, wherein the reducing step or at least one of the reducing steps is performed when, for a few seconds, the grid voltage is decreased up to at least about 20 % of its normal value and wherein the reducing step of at least one of the reducing steps is terminated when, for a few seconds, the normal grid voltage is increased again up to at least about 90 % of its normal value.
4. Method according to any one of claims 1 to 3, wherein the step of reducing the output voltage of the DC link circuit (24) comprises controlling the time interval between a crossover of the output voltage

- 11 -

of a phase of the generator (14) and an operation of an electronic switch (25) of the AC/DC converter (20).

5. Method according to any one of claims 1 to 3, wherein the step of reducing the output voltage of the DC link circuit (24) comprises reducing the pulse width interval of the electronic switch (25) of the AC/DC converter (20).
6. Method according to any one of claims 1 to 5, wherein the reduction of the output voltage of the DC link circuit (24) and/or the reduction of the operational frequency of the DC/AC converter (22) is/are performed such that an increased current flows without a substantial change of the energy losses in the electronic switches (28) of the DC/AC converter (22).